

Pechiney's Unpublished Authorities

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CRYOVAC, INC.,)	
Plaintiff/Counter-Defendant)	
)	
v.)	
)	Civil Action No. 04-1278-KAJ
PECHINEY PLASTIC PACKAGING, INC.)	
)	CONFIDENTIAL --
Defendant/Counter-Plaintiff.)	FILED UNDER SEAL
)	
)	

UNPUBLISHED AUTHORITIES CITED IN SUPPORT
OF DEFENDANT PECHINEY PLASTIC PACKAGING, INC.'s
RESPONSES TO CRYOVAC's MOTIONS IN LIMINE

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Case	Citation
<i>Colassi v. Cybex, Int'l, Inc.</i>	2005 WL 1972558, at *1 (D. Mass. Aug. 16, 2005)
<i>Eisenberg v. Alimed, Inc</i>	2000 WL 1119743 (Fed. Cir. Aug. 8, 2000)
<i>Liquid Dynamics Corp. v. Vaughan Co., Inc.</i>	2004 WL 2260626 (N.D. Ill. Oct. 1, 2004)
<i>SBC Interactive, Inc. v. Corporate Media Partners</i>	1997 Del. Ch. LEXIS 180 (Del. Ch. Dec. 24, 1997)
<i>Sowell v. Townsends, Inc.</i>	2000 WL 305502 (Del. Super. Ct. Jan. 26, 2000)

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Briefs and Other Related Documents
Only the Westlaw citation is currently available.
United States District Court, D. Massachusetts.
Gary J. COLASSI
v.
CYBEX INTERNATIONAL, INC.
No. Civ.A.02-11909 RWZ.

Aug. 16, 2005.

David M. Quinlan, David M. Quinlan P.C., Princeton, NJ,
Frederick C. Laney, Paul K. Vickrey, Timothy J. Haller,
Niro, Scavone, Haller & Niro, Chicago, IL, Kathleen B.
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E. Delorenzi, Gibbons, Del Deo, Dolan, Giffinger & Vec-
chione P.C., Newark, NJ, for Cybex International, Inc.

ORDER ON MOTIONS IN LIMINE

ZOBEL, J.

*1 Both parties have filed motions in limine that pertain to the impending trial. The motions were attached as exhibits C and D to the parties' pretrial memorandum. (# 104 on the court's docket). I address them in the order in which the parties arranged them.

Plaintiff's Motions-Exhibit C

1. Plaintiff moves to exclude evidence of defendant's effort "to design around the patent," both for failure to disclose the proposed evidence earlier except by defendant's damages expert and because it is hearsay. Although hearsay, defendant asserts the evidence is the sort experts usually rely on.

The motion is allowed. It is hearsay and offered largely for the truth of the statements. Moreover, it is difficult to see the relevance to the damages calculations.

2. Plaintiff anticipates that defendant will offer license agreements to support its position on the calculation of a reasonable royalty. This motion seeks to exclude this evidence on the grounds that defendant had failed to produce such agreements pretrial. Defendant says that it produced one, albeit late, a license to Krull, which is the only patent

license and thus the only one "relevant" to the damages calculation. Others cited by plaintiff, defendant says, are not with defendant.

To the extent that the licenses not produced are, according to defendant, not relevant, the motion to exclude them is allowed on relevance grounds. It is denied as to the Krull license and as to any brought to the table during the deposition of defendant's damages expert, John Jarosz.

3. Plaintiff moves to preclude defendant from arguing non-infringement under the reverse doctrine of equivalence.

The motion is allowed because defendant has cited no persuasive facts to support the theory in this case. And, as defendant concedes, *Amgen, Inc. v. Hoechst Marion, Inc.* 339 F.Supp.2d 202 (D.Mass.2004), which gave credence to the theory, nonetheless found it inapplicable on the facts.

Defendant's Motions-Exhibit D

1. Defendant moves to exclude hearsay statements by third parties as to the efficacy of plaintiff's invention.

The motion is allowed. Plaintiff's state of mind on this issue does not appear to be relevant, and the exception for present sense impression does not apply.

2. This motion attempts yet, again, to adjust the court's claim construction by proscribing specific evidence and argument inconsistent with defendant's view.

Nevertheless, the motion is allowed. Plaintiff shall not offer evidence or argue in a manner inconsistent with the court's claim construction, but what specific evidence and arguments fit within this ruling are left for trial.

3. The motion to preclude references to prior court orders as reflecting wins and/or losses by one side or the other is moot as plaintiff agrees not to so characterize any ruling.

4. The motion to preclude references to the strength of the patent and the like is denied. Plaintiff shall, however, behave.

*2 5. The motion to preclude reference to the relative size of

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the parties is denied, but, again, the parties shall adhere to the rules of relevance and propriety.

Defendant's Motion for Reconsideration of Claim Construction (# 102)

Because the court's decision on claim construction is fully compliant with *Phillips v. AWH Corp.* — F.3d —, (Fed.Cir. July 12, 2005), the motion for reconsideration is denied.

D.Mass.,2005.

Colassi v. Cybex Intern., Inc.

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Briefs and Other Related Documents (Back to top)

- 2005 WL 3534279 (Trial Motion, Memorandum and Affidavit) Colassi's Memorandum in Opposition to Cybex's Renewed Motion for Judgment of Non-Infringement as A Matter of Law (Nov. 28, 2005)
- 2005 WL 2862237 (Trial Motion, Memorandum and Affidavit) Defendant Cybex International, Inc.'s Opposition to Gary J. Colassi's Motion to Add Prejudgment Interest to Judgment (Sep. 22, 2005)
- 2005 WL 2862239 (Trial Motion, Memorandum and Affidavit) Cybex's Opposition to Colassi's Motion to Declare this Case Exceptional under 35 U.S.C. | 285 and Award Fees and Costs; Request for Oral Argument (Sep. 22, 2005)
- 2005 WL 2862501 (Trial Motion, Memorandum and Affidavit) Colassi's Motion, and Memorandum in Support, to Declare this Case Exceptional under | 285 and to Set A Briefing Schedule for Fees and Expenses under Rule 54(d)(2) (Sep. 08, 2005)
- 1:02cv11909 (Docket) (Sep. 27, 2002)

END OF DOCUMENT

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Briefs and Other Related Documents

NOTICE: THIS IS AN UNPUBLISHED OPINION.(The Court's decision is referenced in a "Table of Decisions Without Reported Opinions" appearing in the Federal Reporter. Use FI CTAF Rule 47.6 for rules regarding the citation of unpublished opinions.)

United States Court of Appeals, Federal Circuit.

Joel H. EISENBERG, Plaintiff-Appellant,

v.

ALIMED, INC., Julian H. Cherubini, and Medtecna, Inc.,
Defendants-Appellees.

No. 98-1317.

Aug. 8, 2000.

Rehearing and Rehearing En Banc Denied Oct. 30, 2000.

Before NEWMAN, Circuit Judge, SKELTON and ARCHER, Senior Circuit Judges.

ARCHER, Senior Circuit Judge.

*1 Joel H. Eisenberg (Eisenberg) appeals the judgment of the United States District Court for the District of Massachusetts, based on the jury's verdict, that claims 1, 2, 3 and 6 of U.S. Patent No. 4,445,507 (the '507 patent) and claim 1 of U.S. Patent No. 4,653,490 (the '490 patent) are invalid due to anticipation and obviousness and that these claims are not infringed by the two accused products made by Alimed, Inc. (Alimed).^{FN1} In addition, Eisenberg appeals the district court's denial of his motion for judgment as a matter of law (JMOL).^{FN2} We *affirm-in-part and reverse-in-part*.

FN1. See *Eisenberg v. Alimed, Inc.*, Civil Action No. 91-12413-NG (D.Mass. March 23, 1995) (Eisenberg II).

FN2. See *Eisenberg v. Alimed, Inc.*, C.A. No. 91-CV-12413-NG (D.Mass. March 17, 1998) (Eisenberg III).

BACKGROUND

Eisenberg filed suit against Alimed claiming that its Freedom Thumbkeeper and SportsFit Orthosis infringed his '490 and '507 patents. The '490 and '507 patents are directed to a

glove with a thumb restraint designed to protect the ulnar collateral ligament (UCL) that connects to the thumb's lower joint, the metacarpal phalangeal (MP) joint. Alimed counterclaimed, alleging invalidity of claims 1, 2, 3, and 6 of the '507 patent and claim 1 of the '490 patent. The jury returned a verdict that the patents were not infringed and were invalid.

Eisenberg filed a motion for JMOL on the issues of infringement and validity in which he sought to have the claims construed pursuant to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 34 USPQ2d 1321 (Fed.Cir.1995) (en banc), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577, 38 USPQ2d 1461 (1996). The district court denied the motion for JMOL, holding that there was no evidentiary basis for overturning the jury's verdict. The court also held that Eisenberg had waived the right to have the court construe the claims.

DISCUSSION

We review a district court's decision on a motion for judgment as a matter of law following a jury verdict by reapplying its own standard of review. See *Tec Air, Inc. v. Denso Manufacturing Michigan, Inc.*, 192 F.3d 1353, 1357, 52 USPQ2d 1294, 1296 (Fed.Cir.1999) (citing *Applied Med. Resources Corp. v. United States Surgical Corp.*, 147 F.3d 1374, 1376, 47 USPQ2d 1289, 1290 (Fed.Cir.1998)). Under this standard, we can reverse a denial of a motion for JMOL only if the jury's factual findings are not supported by substantial evidence or if the legal conclusions implied from the jury's verdict cannot in law be supported by those findings. See *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454, 46 USPQ2d 1169, 1172 (Fed.Cir.1998) (en banc).

I. Claim Construction

Eisenberg contends that the district court failed to construe the claims pursuant to *Markman* prior to consideration of the JMOL motion. Alimed responds that Eisenberg has not identified any disputed claim interpretation issue that could affect the invalidity verdict. Claim construction is a question of law which we review *de novo*. See *Cybor*, 138 F.3d at 1456, 46 USPQ2d at 1174.

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The '507 patent is representative and provides:

1. A glove for preventing injury to the thumb's ulnar collateral ligament comprising:

*2 a hand covering having a thumb portion, said thumb portion having a retainer means disposed at least in part on the radial side of said thumb portion, said retainer means being inflexible in the radial direction, and when the wearer's thumb is in place in said thumb portion of said glove, said retainer means is disposed to extend over the thumb's metacarpal phalangeal joint and is of sufficient length to also extend over substantial portions of the adjacent bones which form the joint so as to generally immobilize the bones with respect to the joint in the radial direction whereby radial movement of the thumb which might injure the ulnar collateral ligament of the thumb is prevented.

2. The glove of claim 1 wherein said retainer means comprises a trough, said trough disposed on the radial side of said thumb portion and extending from the approximate tip of said thumb portion to the wrist area.

3. The glove of claim 2 wherein said trough has a hollow section, which said section fits around said radial side of said thumb portion.

6. The glove of claim 1 wherein said retainer means fits around the entire thumb portion.

col. 4, II. 26-47, 54-55.

A. Glove

In considering Eisenberg's post-trial motions the district court noted that it had previously construed the term "glove" as a matter of law, adopting Eisenberg's definition of "glove" as encompassing splint-like devices. *See Eisenberg III*, slip op. at 11. This claim construction was set forth in the district court's Memorandum and Order denying Alimed's summary judgment motion. *See Eisenberg v. Alimed, Inc.*, Civil Action No. 91-12413-NG, slip op. at 8 (D.Mass. Sept. 29, 1994) (Eisenberg I). Thereafter, the court instructed the jury that the term "glove," as used in the patent claims "may encompass splint-like devices." Eisenberg alleges no error by the district court in construing the term "glove."

B. Retainer Means

With respect to the "retainer means," the court concluded that means-plus-function limitations in the claims were not covered by *Markman*, and did not construe the term. *See Eisenberg III*, slip op. at 11, n11. Although means-plus-function limitations were not at issue in *Markman*, *see Markman*, 52 F.3d at 976 n. 8, 34 USPQ2d at 1328 n. 8, this court has since decided *Cybor*, which involved the construction of means-plus-function limitations, and held that construction of all claims is a matter within the province of the court. *See Cybor*, 138 F.3d at 1454-57, 46 USPQ2d at 1172-75. We are convinced, however, that the jury's verdict must be upheld under a proper construction of the "retainer means" claim limitation.

In determining what structure is intended to accomplish the stated function of the "retainer means," i.e., "generally immobiliz[ing] the bones with respect to the joint in the radial direction whereby radial movement of the thumb which might injure the ulnar collateral ligament of the thumb is prevented," it is necessary to examine the specification. *See* 35 U.S.C. § 112 ¶ 6 (1994); *Overhead Door Corp. v. Chamberlain Group, Inc.*, 194 F.3d 1261, 1272, 52 USPQ2d 1321, 1328 (Fed.Cir.1999). The prosecution history can also supply context to understand the claim language. *See id.*, 194 F.3d at 1272, 52 USPQ2d at 1328; *Cybor*, 138 F.3d at 1457, 46 USPQ2d at 1175. Moreover, when multiple embodiments in the specification correspond to the claimed function, proper application of § 112, ¶ 6 generally reads the claim limitation to embrace each of those embodiments. *See Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1258, 52 USPQ2d 1258, 1264 (Fed.Cir.1999).

*3 Alimed argues that the "retainer means" must allow for normal movement of the thumb, or movement towards the palm of the hand. Eisenberg argues that the "retainer means" is not limited only to those structures which allow normal movement.

The claim language provides that the "retainer means" is "inflexible in the radial direction." '507 patent, col. 4, II. 30-31. The preferred embodiment in the specification discloses an inflexible "retainer means" that does not restrict movement in other directions. *See* '507 patent, col. 2, II.

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36-39, col. 1, II. 48-51, col. 2, II. 44-45. However, another embodiment discloses that the "retainer means" may be made of material which flexes in the direction of normal thumb movement and is inflexible in other directions. *See id.*, col. 3, II. 30-33. For example, one embodiment includes hinging the trough adjacent to the upper joint of the thumb, thus permitting movement forward, but not in the radial direction. *See id.*, col. 3, II. 24-30. The same effect can be achieved by using a single piece trough made of material which flexes only in the direction of normal thumb movement. *See id.*, col. 3, II. 30-33. In addition, the hinge and thumb piece structure may also be formed by using a series of overlapping sections to permit the thumb to bend normally but restrict abnormal movement. *See id.*, col. 3, II. 33-40.

From the specification, it is clear that the structures contemplated under claim 1 restrict radial movement, but allow normal movement while protecting the UCL. Indeed, the summary of the invention provides that Eisenberg "discovered that stress on the ulnar collateral ligament can be greatly reduced *while allowing the thumb and hand normal freedom of movement* *See id.*, col. 1, II. 34-36 (emphasis added).^{FN3}

FN3. Eisenberg argues that the description in the specification of an added semi-cylindrical thumb piece that covers the ulnar side of the thumb which "may be flexible", see '507 patent, col. 2, II. 67-8, col. 3, II. 1-4 (emphasis added), supports his proposed construction that the disclosed invention is not required to be flexible in directions other than the radial direction. We are convinced that this gives undue weight to the isolated word "may" and would be inconsistent with numerous other teachings of the specification.

Finally, the prosecution history contains Eisenberg's declaration that "[n]ormal movement of the bones and joint, however, is not hindered, and the thumb can be used to grasp."

We therefore construe "retainer means" to be limited to structures that restrict radial movement and protect the UCL, but that also allow normal movement of the MP joint,

or movement towards the palm of the hand.

C. Trough and Hollow

The district court also did not construe the terms "trough" or "hollow" used in claims 2 and 3 of the '507 patent. We note, however, that claim terms receive their ordinary and customary meaning unless the patentee assigns a special meaning. *See Cortland Line Co., Inc. v. The Orvis Co., Inc.*, 203 F.3d 1351, 1356, 53 USPQ2d 1734, 1737 (Fed.Cir.2000). A "trough" is defined as a "long and narrow or shallow channel or depression." Webster's New Collegiate Dictionary 1244 (1979). "Hollow" is defined as "a depressed or low part of a surface," or as "having an indentation or inward curve." *Id.* at 541. Under these definitions, it is clear that a hollow is an inherent feature of a trough. The specification and drawings of the '507 patent reinforce the customary meaning of these terms.

II. Validity

*4 Eisenberg contends that the claims are not anticipated because no single prior art reference discloses all the elements in the claim. Moreover, he argues that the oral testimony lacked corroboration and thus was insufficient to establish anticipation. Alimed argues that splints which contained every element of the challenged claims were in public use more than one year prior to the date of Eisenberg's patent application. Alimed asserts that corroboration of the oral testimony to this effect is unnecessary pursuant to our holding in *Thomson, S.A. v. Quixote Corp.*, 166 F.3d 1172, 49 USPQ2d 1530 (Fed.Cir.1999).

A person is entitled to a patent unless, *inter alia*, the invention was known or used by others before the invention by the patent applicant, or in public use more than one year prior to the date of the application for patent. *See* 35 U.S.C. § 102(a), (b) (1994). "To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter." *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1566, 37 USPQ2d 1618, 1624 (Fed.Cir.1996).

The record contains the testimony of Colleen Lowe, an occupational therapist, who made splints at Massachusetts

General Hospital during the years 1975-77. She testified that she made radial gutter splints to immobilize the MP joint in patients who had suffered from UCL injuries. The splints were formed by heating and molding orthoplast to the patient's thumb, creating a "trough" that went "along the radial aspect of the thumb." The splints immobilized the MP joint in the radial direction, but allowed a patient to "bring [the] thumb close to [the] palm."

The radial gutter splint contains every limitation of claim 1 of both the '507 patent and the '490 patent, and claims 2 and 3 of the '590 patent. These splints, comprising a "trough," restrict movement in the radial direction and protect the UCL, but allow for normal movement. Moreover, the splints were in use during the 1975-1977 period, more than one year prior to Eisenberg's 1980 application for the '507 patent, and his 1985 continuation-in-part application for the '490 patent.

Eisenberg argues, however, that Ms. Lowe's testimony requires corroboration, and without corroboration, the testimony is insufficient as clear and convincing evidence of anticipation. The rule requiring corroboration is not applicable. *See Thomson*, 166 F.3d at 1174-76, 49 USPQ2d at 1532. Ms. Lowe, whether or not a purported inventor, was a nonparty testifying about an unpatented invention. Ms. Lowe's alleged self-interest, knowing three Alimed employees, does not rise to the level of self interest alleged in *Thomson*, much less the level of self-interest required to justify triggering application of the corroboration rule. *See id.*

Substantial evidence supports the jury's finding that claim 1 of both patents as well as claims 2 and 3 of the '507 patent are invalid as anticipated. Because we find the claims invalid as anticipated, we need not reach the issue of obviousness or infringement as to these claims.

*5 The evidence of record, however, does not support the jury's conclusion that claim 6 of the '507 patent was invalid as anticipated or obvious. We have construed claim 1 to be limited to structures which restrict radial movement and protect the UCL, but which also allow normal movement of the MP joint, or movement towards the palm of the hand. In addition to the limitations of claim 1, claim 6 requires that the retainer means must fit around the entire thumb portion.

The record is devoid of any prior art references that meet these limitations or suggest combining these limitations. Substantial evidence does not support the jury's conclusion that claim 6 was invalid as anticipated or obvious. Consequently, we reverse the district court's judgment that claim 6 is invalid.

III. Infringement

"An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing." *Markman v. Westview Instruments, Inc.*, 52 F.3d at 976, 34 USPQ2d at 1326.

As noted above, dependent claim 6 is limited to structures which restrict radial movement and protect the UCL, allow normal movement of the MP joint, and fit around the entire thumb portion. The accused devices, Alimed's Freedom Thumbkeeper and SportsFit Thumb Orthosis, are made of semi-flexible material that surrounds the entire thumb. However, the record contains the testimony of Dr. Leffert, an orthopedic surgeon, and Ms. Olivett, a hand therapist, both of whom testified that the accused products immobilize the thumb in all directions. Thus, these products cannot allow for normal movement of the thumb or MP joint towards the palm of the hand. Substantial evidence supports the jury's verdict that the accused devices do not infringe claim 6. We therefore affirm the district court's judgment of no infringement as to claim 6.

CONCLUSION

Because substantial evidence supports the jury's verdict that claim 1 of both the '507 and '490 patents, as well as claims 2 and 3 of the '507 patent are invalid, the district court's judgment as to the invalidity of those claims is affirmed. We reverse the district court's judgment with respect to the invalidity of claim 6 because substantial evidence does not support the jury's verdict that claim 6 is invalid. We affirm the district court's judgment that claim 6 was not infringed because the accused devices do not meet the limitations of claim 6.

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Briefs and Other Related Documents (Back to top)

- 2000 WL 33976865 (Appellate Brief) Response to Combined Petition for Panel Reharing and Rehearing En Banc (Oct. 03, 2000) Original Image of this Document (PDF)
- 2000 WL 34467026 (Appellate Petition, Motion and Filing) Combined Petition for Panel Rehearing and Rehearing En Banc (Aug. 22, 2000) Original Image of this Document with Appendix (PDF)
- 1999 WL 33606786 (Appellate Brief) Reply Brief for Plaintiff-Appellant (Apr. 23, 1999) Original Image of this Document (PDF)
- 1999 WL 33606787 (Appellate Brief) Corrected Brief for Appellees Alimed, Inc , Julian H Cherubini, and MedTecna, Inc (Apr. 16, 1999) Original Image of this Document (PDF)
- 1998 WL 34089114 (Appellate Brief) Corrected Brief for Plaintiff-Appellant (Dec. 16, 1998) Original Image of this Document with Appendix (PDF)
- 98-1317 (Docket) (Apr. 23, 1998)

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Briefs and Other Related Documents

Only the Westlaw citation is currently available.

United States District Court, N.D. Illinois, Eastern Division.
LIQUID DYNAMICS CORPORATION, Plaintiff,

v.

VAUGHAN COMPANY, INC., Defendant.
No. 01 C 6934.

Oct. 1, 2004.

Mark Warren Hetzler, Timothy P. Maloney, Jon A. Birmingham, Fitch, Even, Tabin & Flannery, Chicago, IL, Steven C. Schroer, Fitch, Even, Tabin & Flannery, Boulder, CO, Edward E. Casto, Jr., Friedman Suder & Cooke, Fort Worth, TX, for Plaintiff.

Alan L. Unikel, Louis S. Chronowski, Jr., Seyfarth Shaw, Chicago, IL, Robert J. Carlson, Mark P. Walters, Christensen, O'Connor, Johnson & Kindness, Seattle, WA, for Defendant.

MEMORANDUM OPINION & ORDER

CONLON, J.

*1 Liquid Dynamics Corporation ("Liquid Dynamics") sues Vaughan Company, Inc. ("Vaughan") for infringement of U.S. Patent No. 5,458,414 ("the '414 patent") pursuant to 35 U.S.C. § 271 *et seq.* Liquid Dynamics sells a commercial mixing system called "JetMix." JetMix uses the invention described in the '414 patent to prevent settling and separation of liquid and solid components stored in slurry tanks. Liquid Dynamics claims Vaughan's competitive product, "RotaMix," uses mixing systems covered by the '414 patent. Vaughan counterclaims for invalidity and inequitable conduct. The court granted Vaughan's summary judgment motion on non-infringement of the '414 patent. *Liquid Dynamics Corp. v. Vaughan Company, Inc.*, No. 01 C 6934, 2002 U.S. Dist. LEXIS 14102 (N.D.Ill. Jul. 31, 2002). The Federal Circuit reversed and remanded the case for trial. *Liquid Dynamics Corp. v. Vaughan Company, Inc.*, 355 F.3d 1361 (Fed.Cir.2004). Both parties move *in limine* to bar evidence at trial.

DISCUSSION

I. Standard of Review

Evidence is excluded on a motion *in limine* only if the evidence is clearly inadmissible for any purpose. See *Hawthorne Partners v. AT & T Technologies*, 831 F.Supp. 1398, 1400 (N.D.Ill.1993). Motions *in limine* are disfavored; admissibility questions should be ruled upon as they arise at trial. *Id.* Accordingly, if evidence is not clearly inadmissible, evidentiary rulings must be deferred until trial to allow questions of foundation, relevancy and prejudice to be resolved in context. *Id.* at 1401. Denial of a motion *in limine* does not indicate evidence contemplated by the motion will be admitted at trial. Instead, denial of the motion means the court cannot or should not determine whether the evidence in question should be excluded before trial. *United States v. Connelly*, 874 F.2d 412, 416 (7th Cir.1989).

II. Liquid Dynamics' Motions *in Limine*

A. Limit Expert Testimony to Disclosed Opinions

1. Liquid Dynamics' Arguments

Liquid Dynamics moves *in limine* to exclude any expert testimony that is new and untimely disclosed. Specifically, Liquid Dynamics asserts that on May 1, 2002, the last day for disclosure of Rule 26(a)(2) rebuttal expert reports, Vaughan submitted a report signed by employees Glen Dorsch and Kent Keeran ("the Dorsch/Keeran report"). On June 10, 2002, the court struck Section III, a purported computational flow dynamics ("CFD") study on a system in Plymouth, Indiana and Section IV, a purported CFD study on another patent, as new and untimely expert opinion. Liquid Dynamics argues that all trial testimony pertaining to Sections III or IV of the Dorsch/Keeran report must be excluded. Liquid Dynamics further contends any new opinion testimony by Dorsch or Keeran regarding infringement or critiques of CFD simulations conducted by Liquid Dynamics' expert, Dr. Lueptow, beyond that disclosed in the original report should also be excluded. Finally, Liquid Dynamics asserts Vaughan should be limited to offering either Dorsch or Keeran to testify about the report in accordance with this court's standing order limiting each party to only one expert witness per subject.

2. Vaughan's Arguments

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*2 Vaughan responds that it does not intend to present expert testimony from both Dorsch and Keeran. However, Vaughan asserts both witnesses worked directly on the design, analysis and implementation of some or all of Vaughan's accused systems. Thus, both will likely be offered at trial for fact testimony. With respect to Sections III and IV of the report, Vaughan affirms it will not violate the court's order. However, Vaughan contends it originally submitted Sections III and IV in the event Liquid Dynamics' experts testify, despite the absence of any such opinions in their reports, that prior art did not generate a substantial helical flow. If Liquid Dynamics does not offer new testimony, Vaughan will not offer Sections III and IV barred by the court's order.

3. Findings

Fed.R.Civ.P. 26(a) requires disclosure of expert witnesses and their written reports. The rule provides, "these disclosures shall be made at the times and in the sequence directed by the court." Fed.R.Civ.P. 26(a)(2)(c). Failure to comply with Rule 26 precludes a party from using at trial expert testimony that was not timely or fully disclosed. Fed.R.Civ.P. 37(c)(1). The sanction of exclusion is mandatory and automatic unless the party can show its Rule 26(a) violation was either justified or harmless. *Finley v. Marathon Oil Co.*, 75 F.3d 1225, 1230 (7th Cir.1996). The court previously struck Sections III and IV of the Dorsch/Keeran report as untimely disclosed expert opinion. The motion *in limine* to exclude any evidence or testimony relating to Sections III and IV of the Dorsch/Keeran report must be granted. Further, the motion *in limine* to exclude all new opinion testimony by Dorsch or Keeran regarding infringement or critiques of Lueptow's CFD simulations beyond that disclosed in the original Dorsch/Keeran report is granted. Finally, this court's "Standing Order Establishing Pretrial Procedure" limits each party to one expert witness per topic. Liquid Dynamics' motion to preclude Vaughan from presenting both Dorsch and Keeran as experts is moot in light of Vaughan's representation that it will not do so. The motion *in limine* to preclude both witnesses from testifying must be denied.

B. Expert Testimony of Norcross and Bathija

1. Liquid Dynamics' Arguments

Liquid Dynamics seeks to exclude expert testimony by Prakash Bathija, who is on Vaughan's witness list. Liquid Dynamics asserts Bathija is the author of an article entitled "Jet Mixing." However, Bathija was not timely disclosed as an expert witness. The court is asked to limit his testimony to authentication of the article because any testimony beyond authentication would amount to expert opinion. Further, Liquid Dynamics seeks to exclude undisclosed expert opinion testimony from Ken Norcross, also on Vaughan's witness list. On July 18, 2002, the court struck Norcross' summary judgment declaration as untimely and inappropriate expert opinion not disclosed prior to April 1, 2002, the deadline for disclosure of expert reports. However, Liquid Dynamics is concerned Vaughan will elicit expert opinion from Norcross at trial under the guise of lay opinion.

2. Vaughan's Arguments

*3 Norcross is a former vice-president and director of technology at U.S. Filter Jet-Tech. Vaughan asserts Norcross was identified well before the close of discovery as a witness having knowledge regarding prior art systems. Vaughan contends the court's July 18, 2002 order striking Norcross' declaration acknowledged Norcross' knowledge of certain prior art systems. Vaughan proposes to call Norcross as a lay witness having personal knowledge of prior art, but not as an expert witness. Vaughan assures the court Norcross' testimony is purely factual in nature and he will not be asked to opine on flow patterns. Finally, Vaughan indicates it will not call Bathija as a witness at trial.

3. Findings

Liquid Dynamics' motion regarding Bathija is moot in light of Vaughan's representation that Bathija will not be called to testify. As to Norcross, the July 18, 2002 order specifically ruled that Norcross' conclusory opinions in his summary judgment declaration regarding helical flow patterns of prior art mixing systems were "not lay witness opinion under Fed.R.Evid. 702. The '414 patent and purported prior art helical flow patterns have been the subject of expert testimony by both parties. The analysis of a system's flow patterns is based on technical and scientific data." Further, Nor-

cross' summary judgment declaration lacked sufficient foundation to establish his opinions regarding the validity of the '414 patent and the mixing industry's prior use of the '414 patent's claims were based on personal knowledge. Accordingly, the court struck Norcross' inappropriate and untimely expert testimony. Contrary to Vaughan's assertions, the court did not rule that Norcross is knowledgeable regarding certain prior art systems. Rather, the court indicated four paragraphs of his declaration that explained U.S. Filter Jet-Tech documents were apparently based on personal knowledge.

With proper foundation, lay opinion testimony may be admissible to assist the jury or court understand the factual issues. *Stagman v. Ryan*, 176 F.3d 986, 995-96 (7th Cir.1999). However, Fed.R.Evid. 701 provides lay witnesses may not opine regarding scientific, technical or other specialized knowledge within the scope of Fed.R.Evid. 702. Lay opinion testimony is "not to provide specialized explanations or interpretations that an untrained layman could not make if perceiving the same acts or events." *U.S. v. Conn*, 297 F.3d 548, 554 (7th Cir.2002). The motion *in limine* regarding Norcross is granted in part. Norcross may not testify to the flow pattern information contained in his summary judgment declaration. With proper foundation evidencing personal knowledge, Norcross' testimony regarding prior art systems is not clearly inadmissible for all purposes. The extent to which Norcross may offer lay opinion testimony not based on scientific, technological or other specialized knowledge, however, is unclear. The court must reserve ruling on the admissibility of Norcross' lay opinion testimony until trial. The parties will not refer to Norcross' opinions in opening statements, through questioning witnesses, or otherwise in the jury's presence without prior court authorization.

C. Expert Testimony of Breidenthal

1. Liquid Dynamics' Arguments

*4 Liquid Dynamics seeks to exclude the testimony of Dr. Robert Breidenthal, an expert witness who submitted two reports on Vaughan's behalf and was deposed during discovery. Liquid Dynamics contends Breidenthal's opinions regarding patent validity and infringement should be barred because they are based on an improper claim construction

rejected by the Federal Circuit. Liquid Dynamics argues Breidenthal's opinions are expressly based on an interpretation requiring the claim term "substantially helical" to conform to Figure 6 of the '414 patent. In contrast, the Federal Circuit construed the term "substantially helical" to encompass "all flow patterns that are generally, though not necessarily perfectly, spiral and that fill much, though not necessarily all, of the tank's volume." *Liquid Dynamics*, 355 F.3d at 1369. This construction expressly rejected any claim construction requiring the nearly perfect helix portrayed by Figure 6. The Federal Circuit held it is inappropriate to rely "on the written description of Figures 5 and 6 to import the limitation of a perfectly helical flow. There is no language in the claim requiring such a perfectly helical flow." *Id.* at 1368. Liquid Dynamics argues Breidenthal's two opinions and deposition testimony clearly illustrate his reliance on Figure 6 in his assessment of the Vaughan systems. According to Liquid Dynamics, Breidenthal's reliance on a false premise taints all of his disclosed opinions and renders them irrelevant and inadmissible.

2. Vaughan's Arguments

Vaughan responds that Breidenthal may be called to testify to: (1) the teachings of the '414 patent to one of ordinary skill in the art; (2) whether the teachings of the patent provide information sufficient for one of ordinary skill in the art to practice the invention claimed, and specifically, to create in a storage tank the helical flow pattern required by the claims; and (3) whether the evidence proffered by Liquid Dynamics demonstrates all limitations of the '414 patent's claims. Vaughan argues Breidenthal's opinions are based on his review of the patent's teachings and the language of the patent claims. His opinions do not require strict adherence to the structure of Figure 6. Instead, Breidenthal's opinions recognize Figures 5 and 6 illustrate desirable flow patterns and describe a preferred embodiment. His opinion, whether the patent includes a description sufficient to teach one of ordinary skill in the art how to practice the invention, is independent of flow pattern. Breidenthal concludes the patent does not teach how to achieve any specified flow pattern let alone a substantially helical one. Because Breidenthal's opinions are not premised on an understanding that "substantial helical flow" requires precise adherence to Fig-

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ure 6, his testimony is not rendered irrelevant or inadmissible by the Federal Circuit's claim construction.

3. Findings

Vaughan asked Breidenthal to opine whether: (1) the teachings of the '414 patent enable one skilled in the art to practice the invention; (2) Vaughan's configuration infringed the '414 patent's claims; and (3) Liquid Dynamics' experts Lueptow and Gillette properly construed the '414 patent claims. Breidenthal clearly relied on Figure 6 to answer those questions. His March 29, 2002 letter to Vaughan's counsel indicates Figures 5 and 6 represent "desirable flow patterns," and "the pitch of the helical flow pattern of FIG. 6 is presumably influenced by the ratio of the net radial to the net azimuthal momentum. The patent offers no teaching here." Breidenthal concludes the patent does not teach a specified flow pattern, particularly a substantially helical one. He further asserts a central issue to the infringement question concerns the helical flow path described in Claims 1 and 8, and states:

*5 Claim 1 refers to "a substantial helical flow path" and Claim 8 refers to "a substantially helical flow path." FIG. 6 illustrates a flow path where a fluid element completes 14 orbits about the minor axis over about half of a full torus. Thus FIG. 6 teaches that the helix should have a fine pitch, with many orbits about the minor axis during one rotation about the major axis. From FIG. 6, I estimate that the ratio of the characteristic transverse speed V to the characteristic azimuthal speed U is approximately 18. The transverse component completely dominates the azimuthal component of the flow. Therefore, the helix described by the Claims 1 and 8, is substantial.

Breidenthal then compares CFD simulations to Figure 6 of the '414 patent: Computational fluid dynamics simulations of Vaughan configurations by ADA Technology yield predicted particle trajectories that do not resemble FIG. 6 ... This is evident in a comparison between FIG. 6 of the '414 patent and VA 2880-2891. The basic shapes of the flow paths are completely different. The Vaughan flows shown in these computations do not exhibit a substantial helix, in my view.

Breidenthal's April 20, 2002 letter to Vaughan's counsel

comments: I believe one of average skill in the art would consider a "substantially helical flow path" that "substantially" fills the volume to imply a predominantly helical flow throughout most of the volume, as indicated in FIG. 6 of the '414 patent. In my view, none of the figures in Professor Lueptow's report resemble FIG. 6 of the '414 patent.

At his deposition, Breidenthal testified "the term substantially helical implies something like figure six ..." and admitted he compared various Vaughan flows to Figure 6. Breidenthal Dep. at 88, 90, 95-96.

Breidenthal relied on Figure 6 to opine on enablement; he concluded the patent does not teach how to achieve the results portrayed by Figure 6. He relied on Figure 6 to determine infringement; he concluded Vaughan's systems did not resemble Figure 6. He relied on Figure 6 to rebut Lueptow and Gillette's opinions; he concluded none of their figures resembled Figure 6. Vaughan argues that although Breidenthal relied on Figure 6, he did not require "strict conformance," rather he required "substantial" conformance because he used flexible phrases such as "*desirable* flow pattern," "*resemble* Figure 6," "*something like ...* Figure 6," and "*basic shapes* of the flow paths." Vaughan contends the use of these phrases indicates he understood the claim words must be read in light of their ordinary meaning, an approach consistent with the Federal Circuit's holding.

Irrelevant evidence is not admissible. Fed.R.Evid. 402. Relevant evidence is defined as "evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Fed.R.Evid. 401. Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, waste of time, and jury confusion. Fed.R.Evid. 403. Breidenthal's opinions rely extensively on Figure 6. In light of the Federal Circuit opinion, any probative value of Breidenthal's opinion is outweighed by the danger of unfair prejudice and jury confusion. Accordingly, the motion *in limine* to exclude Breidenthal's expert testimony must be granted.

D. Testimony of Attorney Sandler

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1. Liquid Dynamics' Arguments

*6 Liquid Dynamics seeks to exclude testimony from Ronald Sandler, Vaughan's patent attorney, who is offered to opine on the issue of materiality in support of Vaughan's inequitable conduct defense. Vaughan offers Sandler's testimony that the sale of a sludge storage tank to a city in Indiana was material prior art that should have been disclosed during prosecution of the '414 patent. Liquid Dynamics argues Sandler needs a technical background in the relevant art, specifically fluid dynamics and waste treatment systems, to testify on materiality. Liquid Dynamics bases its argument on *Baxter Int'l v. McGaw, Inc.*, 149 F.3d 1321, 1328 (Fed.Cir.1998) (materiality is "judged based upon the overall degree of similarity between the omitted reference and the claimed invention in light of the other prior art before the examiner"). Liquid Dynamics asserts Sandler admittedly does not have a technical background in the relevant art. In addition, because two of his three opinion letters were disclosed on an untimely basis, his opinion should be barred under Fed.R.Civ.P. 26(a) and 37(c)(1). Finally, Liquid Dynamics argues at a minimum Sandler's testimony should be heard by the court outside the jury's presence because inequitable conduct is an issue for the court, not the jury, to decide. *Paragon Podiatry Lab., Inc. v. KLM Labs., Inc.*, 984 F.2d 1182, 1190 (Fed.Cir.1993).

2. Vaughan's Arguments

Vaughan responds Sandler, a former examiner for United States Patent and Trademark Office and a patent attorney with 40 years of practical experience prosecuting patent applications, would provide expert opinion testimony relevant to the determination of whether a "reasonable patent examiner" considers certain prior art references material. *Molins PLC v. Textron*, 48 F.3d 1172, 1179 (Fed.Cir.1995) ("information is 'material' when there is a substantial likelihood that a reasonable examiner would have considered the information important in deciding whether to allow the application to issue as a patent"). Vaughan asserts Sandler is not offered for his expertise in the technical field; rather, he is offered for his expertise and knowledge as an attorney and former patent examiner under Fed.R.Evid. 702. Vaughan further asserts its original disclosure of Sandler's expert report was timely. Sandler however, on his own voli-

tion, sent two rebuttal letters to Vaughan's litigation counsel responding to Liquid Dynamics' expert rebuttal reports. Vaughan states its counsel did not request the additional letters and produced them, not for the purpose of injecting untimely testimony, but out of an obligation to supplement discovery. Further, the letters do not offer new opinions. Rather, they reinforce Sandler's original opinions and reflect statements Sandler would make on cross or re-direct examination regarding Liquid Dynamics' rebuttal opinions. Vaughan argues there is no prejudice to Liquid Dynamics if the statements are offered at trial in strict rebuttal to cross-examination. Finally, Vaughan contends patent lawyers regularly testify at trial and patent legal experts are routinely allowed to offer expert opinion testimony on whether undisclosed prior art references are material. *See e.g., Yarway Corp. v. Env. Control USA, Inc.*, 775 F.2d 268, 274 (Fed.Cir.1985); *Hebert v. Lisle Corp.*, 99 F.3d 1109, 1115 (Fed.Cir.1996).

3. Findings

*7 Sandler's testimony is not clearly inadmissible for all purposes. A patent lawyer may testify in a patent suit. *Endress + Hauser, Inc. v. Hawk Measurement Sys. Pty, Ltd.*, 122 F.3d 1040, 1042 (Fed.Cir.1997). Sandler's lack of technical expertise goes to the weight of his testimony as opposed to its admissibility. Indeed, the court has discretion to adopt the legal opinion as its own, find guidance from it, or disregard it completely. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 983 (Fed.Cir.1995). As a former patent examiner, his testimony is relevant to the "reasonable patent examiner" standard as applied to the materiality of undisclosed prior art. Moreover, Vaughan has asserted justification for producing two of Sandler's three opinion letters after the deadline for expert reports passed, and acceptable reasons why Liquid Dynamics will not be prejudiced if the letters are not excluded. Liquid Dynamics has been in possession of the two letters for years and the contents are not a surprise. The motion *in limine* must be denied.

However, "a patent case is complex and confusing enough for a jury without infusing evidence which has no relevance to the issues to be decided by that jury." *THK Am., Inc. v. NSK, Ltd.*, No. 90 C 6049, 1996 U.S. Dist. LEXIS 226, *4 (N.D.Ill. Jan. 9, 1996). Because evidence of inequitable con-

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duct is effectively evidence of fraud, there is a danger the evidence will unnecessarily "spill over" to Liquid Dynamics' prejudice on issues that are before the jury. *Id.* at *4-5. For this reason, Sandler's testimony will be heard by the court outside the jury's presence. Counsel shall not refer to Sandler's testimony in the jury's presence.

E. Reliance on Prior Art References and Testimony

1. Liquid Dynamics' Arguments

Liquid Dynamics asserts Vaughan recently produced a list of 70 prior art references that Vaughan may rely on at trial to show invalidity of the '414 patent. Liquid Dynamics argues that to rely on the prior art references, Vaughan must present expert testimony explaining element-by-element how each reference anticipates the '414 patent. However, Vaughan has not properly disclosed a witness skilled in the art to provide an explanation for each reference or the substance of purported testimony. The five individuals disclosed by Vaughan are: (1) Prakash Bathija, an author on one article; (2) Eric Mandt, an inventor on eight patents; (3) Mark Crump, an officer of Liquid Dynamics and inventor of the '414 patent; and (4)-(5) Glen Dorsch and Ken Norcross, whose proposed opinion testimony was previously stricken by the court. Specifically, Liquid Dynamics contends Bathija and Mandt were not disclosed as experts and Vaughan never disclosed the substance of their opinion testimony. Their testimony was therefore not timely disclosed. Crump is not an expert and at best may have personal knowledge of a few, but not all, references. Finally, the Dorsch and Norcross testimony was excluded as untimely pursuant to the court's June 22, 2002 order.

2. Vaughan's Arguments

*8 Vaughan argues the notice produced was required pursuant to 35 U.S.C. § 282, mandating disclosure of prior art documents and witnesses at least 30 days before trial. In any event, Vaughan contends all references of prior art in the notice were disclosed over two years ago during the original discovery period. Further, Vaughan contends Liquid Dynamics' position that "expert opinion" testimony is required for Vaughan's invalidity counterclaim is not supported by case law. Prior art documents may be explained by wit-

nesses having personal knowledge of the prior art installations. Vaughan contends witnesses having personal knowledge of facts are sufficient because the technology of this case is relatively simple; all prior art references are easy to understand and consist mostly of drawings showing storage tanks and flow generators within the tanks. Therefore, expert opinion testimony is not required for the jury to appreciate whether a document shows the structural features as claimed in the '414 patent. The witnesses identified may be relied upon as prior inventors or as having personal knowledge of prior art.

3. Findings

Liquid Dynamics' motion places substantial reliance on *Koito Mfg. Co., Ltd., v. Turn-Key-Tech, LLC*, No. 03-1565, 2004 U.S.App. LEXIS 17896, *20-25 (Fed.Cir. Aug. 23, 2004). In *Koito*, the Federal Circuit reversed the district court's denial of Turn-Key's motion for judgment as a matter of law with respect to anticipation and obviousness. In denying Turn-Key's motion, the district court relied solely on Koito's reference to another patent application, the JP '082. Koito offered evidence of the JP '082 reference, but did not provide any testimony or other evidence that would "demonstrate to the jury how that reference met the limitations of the claims in the ... patent, or how the reference enabled one of ordinary skill in the art to practice the claimed invention." *Id.* at *21-22. Indeed, Koito never mentioned that reference at trial after submitting it into evidence. The Federal Circuit held the district court erred in finding Koito had provided substantial evidence to support the jury's finding of obviousness based solely on its evidence regarding the JP '082 reference. "We have consistently explained what is necessary to show anticipation by a given reference. Typically, testimony concerning anticipation must be testimony from one skilled in the art and must identify each claim element, state the witnesses' interpretation of the claim element, and explain in detail how each claim element is disclosed in the prior art reference. The testimony is insufficient if it is merely conclusory." *Id.* at *23 (emphasis added).

Koito rejected the notion that explanatory testimony relating to the JP '082 reference was unnecessary based on *Union Carbide Corp. v. American Can Co.*, 724 F.2d 1567

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(Fed.Cir.1991). *Id.* at *24, n. 4. In *Union Carbide*, the alleged infringer did not provide explanatory testimony regarding prior art references. However, the references and the patent, a simple method of dispensing plastic bags, were easily understandable and the patentee, instead of the infringer, provided explanatory analysis regarding prior art references. The patent in *Koito*, which taught a method of strengthening injection-molded plastics by cross-laminating layers of plastics, was "not an easily understandable patent," and therefore needed some explanatory testimony or other evidence to compare the prior art with the patent at issue.

*9 The court disagrees with Vaughan's assertion that the '414 patent is relatively simple because it relates to an apparatus for mixing sludge or slurry in a large storage tank. The '414 patent involves significant scientific and technical information that may not be easily understandable to the jury. Moreover, Vaughan relies on *Union Carbide* to support its assertion that expert testimony is not necessary when a patent is simple. Even in *Union Carbide*, where the expert testimony was not necessary due to the simplicity of the patent, the patentee presented explanatory testimony. In any event, to prove anticipation or obviousness, Vaughan must provide testimony "from *one skilled in the art* and must identify each claim element, state the witnesses' interpretation of the claim element, and explain in detail how each claim element is disclosed in the prior art reference." *Koito* at *23 (emphasis added). The concept "one skilled in the art" is a theoretical construct used to determine obviousness. It does not necessarily refer to a particular individual or an expert. *Endress*, 122 F.3d at 1042. An expert witness may not always be one skilled in the art, and one skilled in the art may not necessarily be an expert witness. *Id.*; see also, *Dayco Prods. v. Total Containment, Inc.*, 258 F.3d 1317, 1324 (Fed.Cir.2001) ("our objective is to interpret the claims from the perspective of one of ordinary skill in the art, not from the viewpoint of counsel or expert witnesses"). Liquid Dynamics' argument that Vaughan must present "expert testimony" for explanation is incorrect. None of the identified witnesses may testify as experts. However, if Vaughan proffers appropriate foundation establishing Mandt, Dorsch, Norcross and Crump are skilled in the art, they may testify about their personal knowledge of prior art. The motion *in limine* must be denied.

III. Vaughan's Motions *in Limine*

A. Willful Infringement

1. Vaughan's Arguments

Vaughan seeks to bar any testimony relating to Liquid Dynamics' claim of willful infringement. According to Vaughan, Liquid Dynamics' complaint and exhibit list show Liquid Dynamics' intent to establish Vaughan willfully infringed at least one claim of the '414 patent. Vaughan argues the state of mind of its decisionmakers is irrelevant because, as a matter of law, there can be no finding of willful infringement. Vaughan argues this court's grant of summary judgment and the Federal Circuit's dissenting opinion establish Vaughan has a substantial defense to infringement. According to Vaughan, the existence of a substantial defense establishes it had a good faith belief it would not infringe the '414 patent and a finding of willful infringement or enhanced damages under 35 U.S.C. § 384 would be inappropriate. Therefore, testimony relating to willful infringement would be irrelevant and prejudicial because of likely jury confusion. Vaughan argues admission of willfulness testimony would force Vaughan to waive the attorney-client privilege because evidence probative of Vaughan's state of mind may require testimony from Vaughan's attorneys who advised the company as to its potential defenses. Vaughan argues the exclusion of willfulness evidence in a trial on liability may ameliorate any risk of prejudice to Vaughan.

2. Liquid Dynamics' Arguments

*10 Liquid Dynamics responds that this motion *in limine* is actually an inappropriate motion for summary judgment. Vaughan ignores cases holding that litigation history, such as this court's summary judgment decision and the appellate dissent, are not relevant to the state of mind of the infringer when the infringement began. Vaughan ignores a recent *en banc* Federal Circuit case flatly rejecting the argument that the existence of a substantial defense to infringement is *per se* sufficient to defeat liability for willful infringement. *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, No. 01-1357, 2004 U.S.App. LEXIS 19185, at *26-27 (Fed.Cir. Sept. 13, 2004). Liquid Dynamics further

argues Vaughan's attorney-client waiver argument is frivolous because Vaughan already disclosed its counsel's opinion during discovery. Liquid Dynamics contends the focus of willfulness is on the infringer's mental state, not the mental state of the attorney authoring the non-infringement opinion. Therefore, a member of the litigation team is wholly unnecessary and Vaughan may use other witnesses at trial.

3. Findings

Vaughan's reliance on *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057 (Fed.Cir.2003) is misplaced. In *State Contracting*, the district court ruled at the close of trial that infringement was not willful as a matter of law. The Federal Circuit affirmed the finding because defendants had a substantial defense to infringement. *Id.* However, in *State Contracting* there was no dispute defendants acted in good faith when they infringed the patent. The facts of this case are very different. Whether Vaughan willfully violated the '414 patent is strongly contested. Even in *State Contracting*, the determination of willfulness was reserved until the end of trial. Vaughan presents no authority for excluding the willfulness issue from the trial. This court's initial grant of summary judgment and the Federal Circuit's dissenting opinion do not preclude a finding of willfulness at trial. The concept of a substantial defense to infringement providing a *per se* preclusion to a willfulness determination has been flatly rejected. *Knorr-Bremse*, 2004 U.S.App. LEXIS 19185, at *26-27. Moreover, a willfulness determination typically requires review of the "totality of circumstances" an analysis of the factual record. *Id.* Vaughan's motion is an inappropriate attempt to limit the scope of trial issues in a manner more appropriately raised in a motion for summary judgment. The motion *in limine* to exclude evidence of willfulness must be denied.

B. Infringement Under Doctrine of Equivalents

1. Vaughan's Arguments

Vaughan seeks to exclude testimony relating to infringement under the doctrine of equivalents. Vaughan argues Liquid Dynamics is subject to prosecution history estoppel due to an amendment made during the prosecution of the '414 patent that narrowed the limitation of a "substantially

helical flow path." On appeal, the Federal Circuit stated "the narrowing amendments introduced during prosecution to overcome the application's obviousness in light of the prior art, however, may prevent Liquid Dynamics from using the doctrine of equivalents to claim any flows that are not substantially helical." *Liquid Dynamics Corp. v. Vaughan Company, Inc.*, 355 F.3d 1361, 1369 (Fed.Cir.2004). Further, the Federal Circuit recognized:

*11 Liquid Dynamics presumptively surrendered its rights to all flows that are not substantially helical, even if they perform the same function as a substantially helical flow. Liquid Dynamics may establish literal infringement of the '414 patent by showing a substantially helical flow, but it will have to overcome presumption of surrender to claim that any flow other than a substantially helical one infringes under the doctrine of equivalents.

Id., 355 F.3d at 1370 (internal citations omitted). Vaughan argues Liquid Dynamics cannot overcome this presumption of surrender because it cannot show the equivalent in question, a flow pattern that is not substantially helical, was unforeseeable at the time of the amendment. Vaughan contends the flow patterns alleged by Liquid Dynamics to be equivalent are encompassed by prior art because they are random, substantial volume-filling flows. These flow patterns were deemed unallowable in the original claims in view of the prior art that embraced those equivalents. Further, Vaughan contends the amendment requiring substantially helical flow was not merely tangential to the asserted scope of equivalents. The amendment requiring "substantial helical flow" was the essence of the invention and is the reason the claims were allowed. Finally, Vaughan argues Liquid Dynamics cannot provide a convincing reason the presumption of prosecution history estoppel should not apply, and Liquid Dynamics' decision to narrow the claims to only "substantially helical flow" is a classic example of surrender.

2. Liquid Dynamics' Arguments

In response, Liquid Dynamics argues the '414 patent's prosecution history explicitly demonstrates it did not intend to surrender any substantially volume-filling flows except those resulting in the "teacup effect." The teacup effect causes solid components to accumulate on the bottom of a

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tank when the contents are simply rotated. Liquid Dynamics states the prosecution history illustrates claim language was added to clarify that it was *not* claiming an arrangement of flow-generating devices resulting in flow directions that caused the teacup effect. The prosecution history emphasized the counter-teacup flow direction of the invention was being claimed, not any specific flow path. Therefore, the only territory surrendered, if any, included flow paths resulting in the teacup effect. Because the surrender of equivalents issue was not before the Federal Circuit, it did not analyze the prosecution history to address whether the presumption of surrender had in fact been rebutted and its comments regarding surrender were *dicta*. Liquid Dynamics argues it is able to rebut the presumption of surrender.

First, Liquid Dynamics asserts all teacup countering flows were not foreseeable. Foreseeability depends on underlying factual issues; by arguing Liquid Dynamics should be precluded from presenting any evidence as to what one of ordinary skill in the art would have considered foreseeable, Vaughan improperly seeks summary judgment on the issue. Further, the prosecution history shows the reason for the amendment was tangential to the asserted equivalent because the amendment was clarifying not narrowing. The inventors amended the claims to better define the flow direction to counter the teacup effect; teacup-countering flow was not shown by the prior art. Finally, because of the shortcomings of language, the inventors could not describe all potential equivalent teacup-countering flows in the claims.

3. Findings

*12 A patent holder is protected from efforts of copyists to evade liability for infringement by making only insubstantial changes to a patented invention. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 726, 122 S.Ct. 1831, 152 L.Ed.2d 944 (2002). "The scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described." *Id.* at 732. When the extension of protection beyond the literal terms of the patent results in an unclear range of equivalents, however, competitors may not be able to determine what is permissible and what infringes. *Id.* at 726. Therefore, competitors may rely upon prosecution history. When the patentee narrows its claims to

fix a rejection by the patent and trademark office, it is estopped from claiming the original, broader claim was an equivalent. *Id.* Competitors may rely on the estoppel to ensure their inventions will not be found to infringe by equivalence. *Id.* "Where the original application once embraced the purported equivalent but the patentee narrowed his claims to obtain the patent or protect its validity, the patentee cannot assert that he lacked the words to describe the subject matter in question." *Id.* at 734. "The doctrine of equivalents is premised on language's inability to capture the essence of innovation, but a prior application describing the precise element at issue undercuts that premise." *Festo*, 525 U.S. at 734-35. In other words, prosecution history estoppel prevents the doctrine of equivalents from recapturing subject matter surrendered during prosecution. *Catalina Mktg. Int'l v. Coolsavings*, 289 F.3d 801, 813 (Fed.Cir.2002).

The Federal Circuit, addressing *Festo* on remand, recognized the Supreme Court established a presumption that a narrowing amendment made for a reason of patentability surrenders the entire territory between the original claim limitation and amended claim limitation. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1365 (Fed.Cir.2003). A patentee may overcome the presumption by showing: (1) at the time of the amendment, the equivalent was unforeseeable; (2) the rationale underlying the amendment bore no more than a tangential relation to the equivalent in question; or (3) there was some other reason suggesting the patentee could not reasonably have described the equivalent in question. *Id.* Accordingly, "the first question in a prosecution history estoppel inquiry is whether an amendment ... has narrowed the literal scope of a claim. If an amendment was not narrowing, then prosecution history estoppel does not apply." *Id.* at 1366. If the alleged infringer shows the amendment was narrowing, the question becomes whether the reason for the amendment was a substantial one relating to patentability. If not, prosecution history estoppel does not apply. If so, it is presumed that the patentee surrendered all territory between the original claim limitation and the amended claim limitation. The patentee may rebut the presumption of total surrender by demonstrating it did not surrender the particular equivalent in question by using one of the three methods outlined by the Supreme Court. *Id.* at 1366-67. If successful, prosec-

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ution history estoppel does not apply. If unsuccessful, prosecution history estoppel bars the patentee from relying on the doctrine of equivalents for the accused element. *Id.* at 1367.

*13 Rebuttal of the presumption of surrender is a question of law to be determined by the court, not the jury. *Id.* The first question in prosecution estoppel inquiry is whether the amendments narrow the literal scope of the claim. Vaughan argues Liquid Dynamics has surrendered its rights to all flows that are not substantially helical. Liquid Dynamics argues the amendments clearly indicate the inventors' intent to claim the counter-teacup flow direction of the invention, not any specific flow path. This court previously reviewed the prosecution history on summary judgment and determined: The original application presented to the Patent and Trademark Office ("PTO") did not describe claim 1's substantial helical flow path. The PTO rejected the original application based on prior art U.S. Patents Nos. 4,332,484 and 2,552,281. In response, the patentee argued the substantial volume filling flow described in Figures 5 and 6 was possible only with their invention, not the prior art patents. The patentee submitted an amendment that substantially narrowed the '414 patent's scope, and expressly outlined the flow pattern currently elaborated in claim 1.

Liquid Dynamics, 2002 U.S. Dist. LEXIS 14102, at *15 (emphasis added). The amendments narrowed the scope of the claim. The Federal Circuit reviewed this court's analysis of the prosecution history, explained that the original claim 1 referred only to a "flow" whereas the amended claim 1 required a "substantial helical flow path," and held the presumption of surrender had been established. *Liquid Dynamics*, 355 F.3d at 1364-65, 1369-70. Liquid Dynamics may therefore rebut the presumption of surrender using any of the three methods articulated in *Festo*.

In assessing the first method of rebuttal, whether an alleged equivalent was unforeseeable at the time of the amendment, a district court may hear expert testimony and consider other extrinsic evidence relating to the relevant factual inquiries. *Festo*, 344 F.3d at 1369. "By its very nature, objective unforeseeability depends on underlying factual issues relating to, for example, the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the

time of the amendment." *Id.* In *Festo*, the Federal Circuit determined factual issues existed relating to the objective unforeseeability of the two accused equivalents and remanded the case to the district court for determination of whether the equivalents would have been unforeseeable to a person of ordinary skill in the art at the time of the amendments. If Liquid Dynamics fails to meet its burden of rebutting the presumption of surrender under the second or third prongs, it may present factual evidence at trial regarding whether the accused equivalent, flow patterns that are not substantially helical, was foreseeable to a person of ordinary skill in the art at the time of the amendments.

Liquid Dynamics does not successfully rebut the presumption of surrender under the second scenario, whether the rationale for the amendment bore no more than a tangential relation to the equivalent in question. Rebuttal under the second method should be discernible from the prosecution history record without the introduction of additional evidence except, when necessary, testimony from those skilled in the art as to the interpretation of that record. *Festo*, 344 F.3d at 1369-70. The original '414 patent application did not describe claim 1's substantial helical flow path; the flow pattern was described through subsequent amendments. A description of the substantially helical flow path, including its counter-teacup producing direction, cannot be considered tangential to the accused equivalent: flow patterns that are not substantially helical. On summary judgment, this court recognized the patent's helical flow path is central to the operation of the invention and the patent was narrowed to encompass a specific type of flow pattern central to the invention. *Liquid Dynamics Corp. v. Vaughan Co.*, No. 01 C 6934, 2002 U.S. Dist. LEXIS 14102, *27-28 (N.D.Ill. July 31, 2002).

*14 Liquid Dynamics has met its burden of rebuttal under the third method. Assessment of the third rebuttal method, whether there is some other reason suggesting the patentee could not reasonably be expected to have described the equivalent in question, should be limited to the prosecution history record when possible. *Festo*, 344 F.3d at 1370. This third category is a narrow one, but it may be satisfied when there was some reason, such as the shortcomings of language, the patentee was prevented from describing the al-

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leged equivalent when it narrowed the claim. *Id.* Liquid Dynamics asserts shortcomings of language prevented the inventors from describing every precise equivalent flow pattern, therefore the prosecution history focused on teaching flows in a different direction to counter the teacup effect. Liquid Dynamics notes the prosecution history shows the amount of detail required to describe a flow path.

The court finds Liquid Dynamics has sufficiently articulated a reason the inventors could not have reasonably described the equivalent in question. Because it was impossible for the inventors to describe all teacup-countering helical flows that might result from changing certain variables, the presumption of equivalents has been overcome. The motion *in limine* to exclude evidence of infringement under the doctrine of equivalents must be denied.

C-E. Unreliable Computer Simulations, Vector Plots and Expert Testimony Unhelpful to Trier of Fact

1. Vaughan's Motions

Vaughan's final three motions seek exclusion of expert testimony and testing. Vaughan argues Liquid Dynamics' CFD simulations do not meet minimum standards and controls as determined by the software's vendor and the relevant scientific community. Further, Vaughan asserts the simulations were performed hastily by an unskilled worker who received virtually no supervision from Lueptow. Consequently, Vaughan contends the results are not scientifically reliable and are inconsistent with independent testing. According to Vaughan, Lueptow fails to account for the discrepancies, and did not exercise the standard of care required in his regular academic work when performing the testing. Vaughan contends Fed.R.Evid. 702 requires exclusion Lueptow's expert testimony because the opinion is based on unreliable data.

Vaughan also seeks to exclude vector plots attached to Lueptow's expert report. Vaughan contends the vector plots are two-dimensional "snap-shots" in the mixing cycle. According to Vaughan, these snap-shots are incapable of tracing the path of liquid or solid components because they lack the three-dimensional data necessary to predict the ultimate direction of flow. For instance, Vaughan asserts vector

plots do not display out-of-plane components of velocity. According to Vaughan, out-of-plane components of velocity, however, often dominate the ultimate path of the particle. Vaughan argues several plots reflect zero or near-zero in-plane velocity. Accordingly, any velocity that might exist is out-of-plane and invisible on the two-dimensional plot. Vaughan contends the vector plots are misleading, and their probative value, if any, is outweighed by the potential prejudicial and confusing effect on the jury.

*15 Finally, Vaughan seeks to exclude any expert opinion testimony that will not assist the trier of fact, including: (1) all opinion testimony of Edward Gillette concerning flow paths in the accused Vaughan systems; and (2) all opinion testimony of Gillette or Lueptow based upon CFD simulations. Vaughan asserts Gillette's opinions are speculative because they are not based on testing, observation or simulation of actual Vaughan installations. Vaughan contends Liquid Dynamics' CFD simulations were performed on computer models with tank geometries and flow parameters radically different from those of the accused Vaughan systems and are therefore unreliable. Vaughan argues the testimony is therefore inadmissible under Fed.R.Evid. 702 because it will not assist the jury in determining the flow patterns of the Vaughan systems.

2. Evidence in Support of Vaughan's Motions

Liquid Dynamics submits a combined opposition to Vaughan's three motions *in limine* seeking exclusion of expert testimony and testing. The court first addresses Liquid Dynamics' arguments regarding the admissibility of evidence submitted in support of Vaughan's three motions.

Liquid Dynamics asserts that on May 1, 2002, the last day for disclosure of Rule 26(a)(2) rebuttal expert reports, Vaughan submitted a report signed by two employees, Dorsch and Keeran (the "Dorsch/Keeran report"). As previously discussed, Sections III and IV of the report are stricken as untimely expert opinion. The unstricken portions of the report opined on the validity of Lueptow's CFD simulations (Section I) and hypothetical alternative systems (Section II). Lueptow's testing and related testimony relates to the issue of infringement. Section I of the Dorsch/Keeran report addressed Lueptow's simulations in approximately

four (4) pages of rebuttal opinion. To support its motions *in limine* challenging Lueptow's expert work and testimony, Vaughan submits two affidavits from Dorsch dated August 24, 2004 and August 26, 2004 that total 42 pages. Liquid Dynamics asserts the August 26th declaration submits new, untimely opinion testimony that: (1) Lueptow's CFD analysis is based on mixing tanks that "vary significantly in tank geometry, nozzle sizing, and nozzle placement from the actual, real world geometries and structures of the accused Vaughan systems" (Dorsch Decl. at ¶¶ 4, 6-38); (2) critique Lueptow's CFD analysis (Dorsch Decl. at ¶¶ 39, 53-58, 60, 62-65, 68, 70-74, 76 and Attachment A); and (3) characterize the factual record (Dorsch Decl. at ¶¶ 77-87). Liquid Dynamics also argues the August 24th declaration submits new, untimely opinion testimony regarding vector plots. Dorsch Decl. at ¶¶ 2-6. Further, Liquid Dynamics contends Dorsch's new opinions rely on newly disclosed materials, specifically: (1) 32 pages of new CFD plots; (2) never disclosed portions of a CFX manual; and (3) publications from the American Institute of Aeronautics and Journal of Fluids Engineering that Vaughan never produced. Finally, Liquid Dynamics asserts Dorsch improperly relies upon deposition testimony from an employee of the CFX software distributor, Mr. Paul, that occurred on the last day of discovery and over a month after the May 2002 report.

*16 Vaughan asserts Liquid Dynamics' objections to the contents of Dorsch's declarations confuse fact with opinion. Vaughan argues Fed.R.Evid. 702 and Fed.R.Civ.P. 26 anticipate an expert may testify in forms other than expert opinion, including statements of fact not within the realm of Rule 26(a) expert opinion. Vaughan asserts Dorsch's declaration does not offer a new opinion, rather it summarizes facts and reiterates opinions and conclusions set forth in the original Dorsch/Keeran report. In support of its response, Vaughan submits a third declaration from Dorsch addressing Liquid Dynamics' objections and asserting his prior two declarations did not set forth a new opinion.

The court has reviewed the May 2002 report and Dorsch's declarations. Vaughan's attempt to submit new opinion testimony by calling it "fact" and trying to squeeze it under the parameters of generalized statements from the May 2002 report is appalling. The Dorsch affidavits are replete with in-

appropriate new opinions and the court will not attempt to recite it all here. As an example, however, Section I of the Dorsch/Keeran report states: "[f]or solving large tank mixing problems ... the tank and nozzle geometry must be constructed correctly ... if a problem to be solved with CFX is set up improperly, the user will get an answer that is incorrect and that may not represent what actually happens in the real world." Dorsch/Keeran Rep. at 3. The report then broadly and generally identifies four weaknesses of Liquid Dynamics' CFD studies: (1) outlet boundary condition; (2) RMS residuals (3) use of 2nd order advection scheme; and (4) mesh refinement or inflation boundaries. *Id.* at 3-6. In contrast, Dorsch's August 26th declaration states specifics, such as "the mixing tanks modeled by Jared Proctor for each of the eight categories vary significantly in tank geometry, nozzle sizing, and nozzle placement from the actual, real world geometries and structures of the accused Vaughan systems." Dorsch Decl. at ¶ 7. The precise dimensions, parameters and other physical characteristics that create, in Dorsch's view, a "huge disconnect" between Liquid Dynamics' computer models and the actual tanks is provided for the first time. In doing so, Dorsch comments:

- The difference in nozzle diameter is "a very significant difference in light of what happens in the real world ... a reduction in nozzle diameter has a big effect on the fluid velocity;" Dorsch Decl. at ¶ 10.

- "This is a problem for two reasons ... the velocity assumed in the model is not just wrong but wildly wrong." The model "departs radically from the real world ... a velocity and flow rate that could not physically be duplicated;" Dorsch Decl. at ¶ 12.

- "There are a great many parameters in this summary of so-called Group A systems that are missing. These missing parameters are not simply important, but critical, to creating a reliable computer model on which to simulate flow pattern ..." Dorsch Decl. at ¶ 17.

*17 Neither the elaborate description of the alleged physical inadequacies of the models, nor the conclusions Dorsch draws about their reliability were contained in the Dorsch/Keeran report. The same is true with respect to the August 24th declaration critiquing Lueptow's vector plots. Indeed, the Dorsch/Keeran report did not even mention, let alone describe, vector plots. Further, the report did not identify

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Dorsch's reliance upon the challenged 32 pages of new CFD plots, never disclosed portions of the CFX manual and new publications.

Vaughan argues the declarations merely recite or summarize facts or reiterate opinions and conclusions disclosed in the report. Further, Vaughan argues factual, non-opinion statements of a witness are not subject to disclosure and Dorsch may testify to facts within his personal knowledge. It is disingenuous for Vaughan to assert generalized statements in the Dorsch/Keeran report, such as "the tank and nozzle geometry must be constructed correctly ...," cover his elaboration more than two and a half years after the close of discovery.

Vaughan further argues the challenged CFD plots are not new information; rather, they display in graphic form: (1) results from simulations not discussed by Lueptow; (2) compilations of data produced by Liquid Dynamics evidencing Lueptow's lack of concern for his underling's work; and (3) summaries of streamline plots that could not have been generated at the time of the Dorsch/Keeran report. This is unacceptable. Expert reports must contain the data or other information considered by the witness in forming opinions, as well as any exhibits to be used as a summary of or support for the opinions. Fed.R.Civ.P. 26(a)(2)(B). Dorsch may not opine or offer "facts" to rebut the reliability of Lueptow's methods, models, data and conclusions beyond the original Dorsch/Keeran report. Failure to comply with Rule 26 precludes a party from using expert testimony that was not timely or fully disclosed. *Finley v. Marathon Oil Co.*, 75 F.3d 1225, 1230 (7th Cir.1996). Vaughan's attempt to circumvent the requirements of Fed.R.Civ.P. 26(a)(2) must fail. The following new opinion testimony is disregarded: August 26th Declaration ¶¶ 4, 6-39, 53-58, 60, 62-65, 68, 70-74, 76-87 and Attachment A; August 24th declaration ¶¶ 2-6; newly cited portions of the CFX manual, and newly cited publications.

3. Disposition of the Motions

Even if the court did not disregard the challenged portions of Dorsch's affidavits, the remaining motions *in limine* would be denied. First, Vaughan's challenges to Liquid Dynamics' application of the CFD technology must fail.

Fed.R.Evid. 702 provides the standard for admitting expert scientific testimony in a federal trial. *See Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). District courts are obligated to prevent unreliable expert testimony from admission. This obligation, however, does not include determination of whether the expert opinions are correct; rather the court's obligation is to examine the reliability of the expert's methodology. *Id.* at 593-96; *Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd.*, 326 F.3d 1333, 1340-44 (11th Cir.2003), *citing Kumho Tire Co., Ltd., v. Carmichael*, 526 U.S. 137, 153-54, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999). The Supreme Court set forth five factors to guide a court in assessing the reliability of scientific expert testimony: (1) "whether a theory or technique ... can be (and has been) tested;" (2) "whether the theory or technique has been subjected to peer review and publication;" (3) "the known or potential rate of error;" (4) "the existence and maintenance of standards controlling the technique's operation;" and (5) whether the technique or method has met with general acceptance. *Id.* at 593-94. The CFD methodology is not at issue. Courts have affirmed the reliability of CFD methodology. *See Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd.*, 326 F.3d 1333, 1343-44 (11th Cir.2003); *Buckley v. Airshield Corp.*, 116 F.Supp.2d 658, 661 (D.Md.2000); *Flomerics, Ltd. v. Fluid Dynamics, Int'l, Inc.*, 880 F.Supp. 60, 61-63 (D.Mass.1995). Vaughan does not dispute that CFD analysis is a reliable, scientific methodology. Indeed, Vaughan's own experts conducted CFD analysis. Instead, Liquid Dynamics' application of that methodology is challenged. The application of a reliable methodology goes to the evidence's probative value, however, not admissibility. *Quiet* at 1343-46. Challenges addressing flaws in the expert's application of a reliable methodology should be raised on cross-examination. *Daubert*, 509 U.S. at 596 ("vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of challenging shaky but admissible evidence"); *see also Quiet*, 326 F.3d at 1344-45.

*18 Second, Vaughan's challenges to Lueptow's vector plots must fail. Vaughan challenged the admissibility of Lueptow's vector plots on appeal. In its opinion, the Federal Circuit noted Vaughan's challenge to the vector plots' reliab-

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ility, yet held Liquid Dynamics' evidence might convince a jury the patent was infringed. *Liquid Dynamics*, 355 F.3d at 1369. In any event, Vaughan has failed to demonstrate the vector plots are unreliable and inadmissible for all purposes.

Finally, Vaughan's challenges to Gillette's testimony must fail. A witness may qualify as an expert by knowledge, skill, experience, training, or education. Fed.R.Evid. 702. Gillette's *curriculum vitae* illustrates he has extensive experience in the field of sanitary engineering. Gillette considered testing conducted by Lueptow and voluminous documentation to formulate his opinions. An expert may consider testing of another expert in formulating opinions. *Walker v. Soo Line R.R.*, 208 F.3d 581, 589 (7th Cir.2000). Gillette's testimony is not inadmissible for all purposes. Vaughan's motions *in limine* to exclude computer simulations, vector plots and expert testimony must be denied.

CONCLUSION

Liquid Dynamics' motions *in limine* to limit testimony of defendant's experts to properly and timely disclosed opinions, to exclude undisclosed and untimely expert testimony of Norcross and Bathija, and to exclude Sandler's testimony are granted in part and denied in part. Liquid Dynamics' motion *in limine* to exclude Breidenthal's testimony is granted. Liquid Dynamics' motion *in limine* to exclude reliance on prior art references and related testimony is denied. Defendants' motions *in limine* are denied.

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Briefs and Other Related Documents (Back to top)

- 2004 WL 3685875 (Trial Motion, Memorandum and Affidavit) Plaintiff's Memorandum in Support of Plaintiff's Motion to Amend Judgment to Include Permanent Injunction (Nov. 29, 2004)
- 2004 WL 3685887 (Trial Motion, Memorandum and Affidavit) Plaintiff's Combined Motion to Amend Judgment to Include Prejudgment and Post-Judgment Interest and Memorandum in Support Thereof (Nov. 29, 2004)
- 2004 WL 3685885 (Trial Motion, Memorandum and Affi-

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- 2004 WL 3685886 (Trial Motion, Memorandum and Affidavit) Vaughan's Renewed Motion for Judgment as a Matter of Law (Invalidity), or in the Alternative, for a New Trial (Nov. 8, 2004)

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- 2004 WL 3685873 (Trial Motion, Memorandum and Affidavit) Trial Motion, Memorandum and Affidavit (Aug. 30, 2004)

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- 2004 WL 3685880 (Trial Motion, Memorandum and Affidavit) Plaintiff's Motion in Limine #1: to Limit Testimony from Defendant's Experts to Properly and Timely Disclosed Opinions (Aug. 30, 2004)

- 2004 WL 3685882 (Trial Motion, Memorandum and Affidavit) Plaintiff's Motion in Limine #4: to Exclude the Testimony of Attorney Ronald Sandler (Aug. 30, 2004)

- 2004 WL 3685883 (Trial Motion, Memorandum and Affidavit) Plaintiff's Motion in Limine #3: to Exclude Testimony of Defendant's Expert Robert M. Breidenthal (Aug. 30, 2004)

- 2004 WL 3685884 (Trial Motion, Memorandum and Affidavit) Plaintiff's Motion in Limine #5: to Exclude Reliance on Prior Art References and Related Testimony (Aug. 30, 2004)

- 2004 WL 3685876 (Trial Motion, Memorandum and Affidavit) Defendant's Motion in Limine Seeking Exclusion of Evidence and Argument Relating to Infringement Under the Doctrine of Equivalents (Aug. 27, 2004)

- 2004 WL 3685877 (Trial Motion, Memorandum and Affidavit) Defendant's Motion Inlimine to Exclude ""Vector Plots"" (Aug. 27, 2004)

- 2004 WL 3685878 (Trial Motion, Memorandum and Affidavit) Defendant's Motion in Limine to Exclude Evidence Relating to Wilful Infringement (Aug. 27, 2004)

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